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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,272	09/25/2001	Michael P. Lyle	RECOP018	9955
21912	7590	06/13/2006	EXAMINER	
VAN PELT, YI & JAMES LLP 10050 N. FOOTHILL BLVD #200 CUPERTINO, CA 95014			PYZOCHA, MICHAEL J	
			ART UNIT	PAPER NUMBER
			2137	

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,272

Applicant(s)

LYLE ET AL.

Examiner

Michael Pyzocha

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11,13,15-17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11,13,15-17 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2137

DETAILED ACTION

1. Claims 1-11, 13, 15-17, 19-21 are pending.
2. Amendment filed 04/27/2006 has been received and considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2, 10-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over I'Anson et al (EPO 0474932), further in view of Sweitzer et al (US 6535551), and further in view of Shanklin et al (US 6487666).

As per claims 1, and 19-21, I'Anson discloses identifying at least two valid states associated with the network protocol in which a first host system communicating with a second host system using the network protocol may be placed; defining at least one valid transition between a first state of the at least two valid states and a second state of the at least two valid

Art Unit: 2137

states; determining that a connection under the network protocol is in the first state; analyzing the stream based at least in part on the determination that the connection under the network protocol is in a first state to determine whether the packet is associated with the at least one valid transition (see p. 3 lines 22-39 and p. 4 lines 27-49).

I'Anson fails to disclose defining an invalid state associated with the network protocol and expressing the at least one valid transition and the invalid transition in the form of a regular expression and using the regular expression to analyze the network protocol stream.

However, Sweitzer et al teaches the use of an invalid state (see column 9 line 63 through column 10 line 23) and Shanklin et al teaches the use of regular expressions (see column 6 lines 39-57).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the invalid state of Sweitzer et al and Shanklin et al's regular expressions to analyze the protocol of I'Anson.

Motivation to do so would have been to handle errors and to recognize and evaluate identifiers, special symbols, or other tokens.

Art Unit: 2137

As per claim 2, the modified I'Anson, Shanklin et al and Sweitzer et al system discloses compiling the regular expression into computer code (see Shanklin et al column 6 lines 39-57).

As per claims 10-11, the modified I'Anson, Shanklin et al and Sweitzer et al system discloses keeping track of which of the at least two states the first host system currently is in and changing the tracked state of the first host system from the first of the at least two states to the second of the at least two states in the event the analysis of the network protocol stream indicates the at least one valid transition has taken place (see I'Anson p. 4 lines 27-49).

As per claim 13, the modified I'Anson, Shanklin et al and Sweitzer et al system discloses the invalid transition indicates that a security-related event has taken or is taking place and defining a further state corresponding to the invalid operation (see p. 4 lines 18-26 where the security related event is the intrusion of Shanklin et al as applied with Sweitzer).

As per claims 15-17, the modified I'Anson, Shanklin et al and Sweitzer et al system discloses keeping track of which state, from the set comprising the at least two states and the further state, the first host system currently is in; and changing the state of the first host system to the further state in the event that the analysis of the network protocol stream

Art Unit: 2137

indicates the invalid operation has taken place and in the event that the analysis of the network protocol stream indicates the invalid operation has taken place, an indication that the invalid operation has taken place then discontinuing analysis of the network protocol stream once the state of the first host system has been changed to the further state (see I'Anson page 4).

5. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified I'Anson, Shanklin et al and Sweitzer et al system as applied to claim 2 above, and further in view of Wijendran (AWK-to-C Translator).

As per claims 3-4, the modified I'Anson, Shanklin et al and Sweitzer et al system fails to disclose the use of optimal C programming language code.

However, Wijendran teaches this optical C code (see page 1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Wijendran's optical C code in the modified I'Anson, Shanklin et al and Sweitzer et al system.

Motivation to do so would have been to maximize runtime performance (see page 1).

Art Unit: 2137

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified I'Anson, Shanklin et al and Sweitzer et al system as applied to claim 2 above, and further in view of Mangione-Smith (How many vector registers are useful?).

As per claim 5, the modified I'Anson, Shanklin et al and Sweitzer et al system fails to disclose the use of nearly optimal computer code.

However, Mangione-Smith teaches nearly optical code (see page 1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Mangione-Smith's nearly optical code in the modified I'Anson, Shanklin et al and Sweitzer et al system.

Motivation to do so would have been that nearly optimal code requires less vector registers (see page 1).

7. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified I'Anson, Shanklin et al and Sweitzer et al system as applied to claim 1 above, and further in view of Blam (US 6467041).

As per claim 6, the modified I'Anson, Shanklin et al and Sweitzer et al system fails to disclose copying the stream to a third party to be analyzed.

Art Unit: 2137

However, Blam teaches a third party analyzer (see column 6 lines 5-29).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Blam's third party analyzer to analyze the protocol analyzer of the modified I'Anson, Shanklin et al and Sweitzer et al system.

Motivation to do so would have been to perform the analysis regardless of what resources are on the network or client (see column 6 lines 5-29).

As per claims 7-9, the modified I'Anson, Shanklin et al, Sweitzer et al, and Blam system discloses the network protocol stream comprises packets of data, each packet being associated with a sequence number indicating its position relative to other packets in the protocol stream, and the third system reassembles the packets into the order indicated by the respective sequence numbers of the packets received where a copy of the network protocol stream is maintained in the third system until analysis has been completed and in the event the packets are received by the third system in sequence number order, a copy is maintained in the third system only of those packets comprising the portion of the network protocol currently under analysis (see I'Anson pages 4-5 and Blam column 6 lines 5-29).

Response to Arguments

8. Applicant's arguments filed 04/27/2006 have been fully considered but they are not persuasive. Applicant argues: Neither Sweitzer, nor I'Anson, nor Shanklin either singly or in combination teaches "expressing as a second regular expression an invalid transition from the first state to the invalid state", and "applying to a received packet associated with the connection: the first regular expression to determine whether the packet is associated with the at least one valid transition, and the second regular expression to determine whether the packet is associated with the invalid transition" and there is no suggestion or motivation in the references to combine Sweitzer's state machine with I'Anson's protocol analyzer and Shanklin's intrusion detection signature analysis.

With respect to Applicant's argument that neither Sweitzer, nor I'Anson, nor Shanklin either singly or in combination teaches "expressing as a second regular expression an invalid transition from the first state to the invalid state" and "applying to a received packet associated with the connection: the first regular expression to determine whether the packet is associated with the at least one valid transition, and the second regular expression to determine whether the packet is associated with the invalid transition", Sweitzer teaches a

Art Unit: 2137

transition from a first state to an invalid state as described in column 9 line 63 through column 10 line 23 and I'Anson teaches a valid transition between a first and second state. Shanklin teaches the use of regular expressions for recognizing and evaluating information (see column 6 lines 39-57). Therefore when combined with the motivation given above the modified system teaches expressing as a second regular expression an invalid transition from the first state to the invalid state and applying to a received packet associated with the connection: the first regular expression to determine whether the packet is associated with the at least one valid transition, and the second regular expression to determine whether the packet is associated with the invalid transition.

With respect to Applicants argument that there is no suggestion or motivation in the references to combine Sweitzer's state machine with I'Anson's protocol analyzer and Shanklin's intrusion detection signature analysis, each of the above identified references relate to monitoring data in a network. I'Anson and Sweitzer each use a state machine to determine how to process the received information, while Shanklin uses regular expressions, which represent an internal state machine (see column 6 lines 50-53), to analyze traffic. Therefore each reference relates to analyzing network traffic. Furthermore,

Art Unit: 2137

Sweitzer teaches the motivation to define an invalid transition as a way to handle errors in the system by placing the system in an error state (see column 10 lines 7-12), while Shanklin teaches the motivation to use regular expression for analysis as the ability to recognize and evaluate identifiers, special symbols, or other tokens. Therefore, motivation exists to combine the references.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2137

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-38655. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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